
Chapter 4

Natural and Cultural Resources

The natural and cultural resources element provides the opportunity for Ludowici to examine and make an inventory of locally significant and unique natural and historic resources, to determine their vulnerability to the impacts of development and other human activities and to develop a strategy for managing the resources in accordance with community preferences.

4.1 Inventory of Existing Conditions

4.1.1 Natural Resources¹

To develop sound and workable alternatives for future land use in Ludowici, it is important to understand the existing conditions of the physical setting. Identification of existing resources is useful in determining the facilities and development of programs that will be needed in the future. This chapter presents information on the city's geology, natural water systems (aquifers, groundwater, surface water, wetlands, river corridors, and flood plains), soils, topography and slopes, agriculture and silviculture, ecological systems, parks and recreation areas, scenic views, and historic components.

Ludowici has passed all required Part V Environmental Ordinances. To ensure compliance, Ludowici must cooperate with the county, federal and state agencies until its code enforcement program is developed.

A. Public Water Supply

Ludowici is served by municipal wells. According to the 2004 Georgia County Guide, public water service supplied 100 percent of the water utilized in the city. In 2000, 3,868 individuals consumed 270,000 thousand gallons per day or 69.80 gallons per individual. To protect wellheads, the City of Ludowici has adopted a wellhead protection ordinance.

B. Water Supply Watershed

Long County has no water supply watersheds as defined by the Department of Natural Resources Rules for Environmental Planning Criteria.

C. Groundwater Recharge Areas

Precipitation is the ultimate source of Georgia's fresh ground water. Recharge is the process by which precipitation infiltrates soil and rock to add to the volume of water stored in pores and other openings within them. Aquifers are soils or rocks that will yield water to wells. While recharge takes place throughout practically all of Georgia's land area, the rate or amount of recharge reaching underground aquifers varies from place to place based on geologic conditions. Major ground water resources may develop where permeable aquifers underlie or are connected to extensive areas favorable for recharge.

¹ Information for the Natural Resources section was drawn from the Georgia Department of Community Affairs, the Georgia Department of Natural Resources, the University of Georgia, the U.S. Department of Agriculture, and the U.S. Fish and Wildlife Services.

Ludowici is located in the coastal plain area. Principal aquifers of the coastal plain include the Upper Brunswick and Lower Brunswick aquifers, the Floridan aquifer system, the Claiborne and Clayton aquifers and the Cretaceous aquifer system.

The Upper and Lower Brunswick aquifers are below the superficial aquifer. These two aquifers rest below Ludowici and consist mainly of phosphatic and dolomitic quartz. These aquifers are generally confined. Now, these aquifers are not a major source of ground water.

The main aquifer beneath Ludowici is the Floridan aquifer consisting of confined limestone, dolostone, and calcareous sand. This aquifer system is one of the most productive ground water reservoirs in the United States. This system supplies about 50 percent of the ground water used in Georgia. It is used as a major water source throughout most of south Georgia.

Wells in this aquifer are high yielding and are extensively used for irrigation, municipal supplies, industry and private domestic supply. For example, the City of Ludowici pumps on average 270,000 gallons daily from the Floridan aquifer.

The Claiborne aquifer is made up of sand and sandy limestone and is mostly confined.

The Clayton aquifer is another important source of water in south Georgia. It is made up of sand and limestone and is generally confined.

The Cretaceous aquifer system is the deepest of the principal aquifers in south Georgia. It serves as a major source of water in the northern one-third of the coastal plain. The aquifer system consists of sand and gravel that locally contain layers of clay and silt which function as confining beds. These confining beds locally separate the aquifer system into two or more aquifers.

The Floridan aquifer is principally recharged immediately south of the Fall Line that stretches across central Georgia from Columbus to Macon to Augusta. This is the point at which streams from harder rock formations of the piedmont cross into softer rock formations of the coastal plain. Most sedimentary rock formations of the coastal plain begin at the ground surface just south of the Fall Line. Most aquifer water originates here. Recharge can also occur at other points where the aquifer dips up to become closer to the surface allowing water from streams, sinkholes, and ponds to penetrate through more shallow ground into the aquifer.

All aquifer recharge areas are vulnerable to both urban and agricultural development. Pollutants from storm water runoff in urban areas and excess pesticides and fertilizers in agricultural areas can access a groundwater aquifer more easily through these recharge areas. Once in the aquifer, pollutants can spread uncontrollably to other parts of the aquifer thereby decreasing or endangering water quality for an entire region.

No recharge areas are located within the city limits of in Ludowici.

D. Wetlands

The City of Ludowici is nearly level. Most of the land on the western side is gently sloping and moderately well drained. The eastern side of Ludowici is nearly level and poorly drained. Due primarily to a high water table, most of the soils in the eastern part of the city have severe to very restrictive limitations for development.

For the most part, woodlands line the creeks draining the area and, consequently, act as buffer zones protecting contiguous water bodies from potential sources of non-point water pollution. Forest topsoil and debris reduce the speed of urban and rural runoff to creeks through absorption, adsorption and mere water flow deterrence. At the same time, absorbed and adsorbed runoff nutrients (dissolved as well as particulate detritus from such sources as fertilizers and farm animal wastes) are incorporated into the nutrient cycles of the forest fringe communities for production and maintenance.

These peripheral uncut strips of forest in the city, account in large part, for the generally good visual quality of surface waters. The city being located in a rural area does have an abundance of "farm game," such as squirrels, rabbits, raccoons, and opossums.

Because of the unusual ecological systems present in the area, it is likely that protected plant and animal habitats can occur anywhere in the city. Therefore, building officials and inspection personnel should be trained in their recognition, and all development projects should be investigated before site clearing and construction.

Wetlands within the city of Ludowici are depicted on Map 1. The majority of wetlands are comprised of marsh and swampland, small farm ponds, and the flood prone areas of the perennial creeks.

E. Protected Mountains

Ludowici has no areas that are over 2,200 feet or more above sea level; has as a percentage slope of 25 percent or greater for at least 500 feet horizontally; nor any ridges, summits, or ridge tops that lie at elevations higher than any such identified area.

F. Protected Rivers

Ludowici has no protected river corridors.

G. Coastal Resources

No parts of Ludowici are classified as "coastal areas".

H. Flood Plains

Flood plains are the channels and relatively flat areas adjoining the channel of a stream or river that has been or may be covered by floodwater. Rivers and streams that run through the south-central Georgia areas are bordered by wide flood plains. These flood plains consist mostly of swamps, pine and hardwood forests. Ludowici does have a limited amount of floodplains on its western border.

Flood plains provide favorable conditions for the growth of pine and hardwood forests. Pines and hardwoods dominate the western edge of the city. As part of the region's wetlands, it provides natural habitat necessary for the survival of endangered or threatened plants and animals.

Ludowici has a high water table, and some areas are susceptible to flooding. The risk of flooding is an important economic issue as well as a public safety concern in the area. Any

major increase in population density and industrial and economic development on the southwestern and western edges could negatively affect these flood plains. Foresight is needed to restore the natural function and preserve the capacity of the flood plains.

Flood hazards along streams typically occur in late winter and early spring. The flood maps for Long County were prepared in March 1978. According to Community-Panel Number 130127 0005 A, the municipality of Ludowici was not included in the development of the FIRM maps. Due to annexations and improved standards for flood mapping, these maps are in need of an update.

Any approach employed in addressing this important environmental concern should be a cooperative one of shared responsibility involving regulation at the state, county and municipal levels of government. The Georgia Department of Natural Resources has established the relative need for flood protection planning, and Ludowici should adhere to all applicable Minimum Environmental Planning Criteria. Through stream encroachment regulation, the state plays an important and direct role in managing activities in the "Floodway." Ludowici should manage "Flood Fringe" areas by applying standards established by federal insurance guidelines and administered by the Federal Emergency Management Agency (FEMA).

I. Soil Types

The primary soils in Ludowici are the Stilison-Pelham-Fuquay and Leefield-Pelham-Mascotte associations (see Map 2). All of these soils are suitable for development. The Stilison-Pelham-Fuquay association is not nearly as likely to be as damp as the Leefield-Pelham-Mascotte association.

Stilison-Pelham-Fuquay. Found as nearly level gently sloping, poorly drained, moderately well drained and well-drained sandy soils, averaging three feet in depth. This map unit is located in western Ludowici on broad smooth areas, in depressions and drainage ways and on ridge tops, usually more than 70 feet above sea level, with gradients ranging from 0 to 4 percent. Natural vegetation is loblolly pine, waxmyrtle, gallberry and sawpalmetto. Soil wetness makes most of this map unit moderately suited to pine woodland and as farmland, but limits its use for urban and recreational development.

Leefield-Pelham-Mascotte. This mapped unit consists of somewhat poorly drained soils on low-lying ridges and poorly drained soils in broad areas and in depressions and drainage ways. This map unit is located on the eastern edge of Ludowici. Natural vegetation consists of longleaf pine, loblolly pine, sweetgum, water oak, waxmyrtle, gallberry and sawpalmetto. Due to wetness, most of the soils in this unit are moderately suited to pine woodland and pasture. However, these soils can be modified to provide favorable sites for development.

According to the information provided by the Natural Resources Conservation Service, mapping and publication are complete. If a detailed map or study is required it is suggested that a soil scientist be consulted or review maps 49, 50, 58 and 59, "Soil Survey of Liberty and Long Counties, Georgia."

J. Steep Slopes

There are no steep slopes in Ludowici.

K. Prime Agricultural and Forest Land

No prime agricultural or forested lands exist in the City of Ludowici.

L. Plant and Animal Habitats

Plant and animal habitats may exist in Ludowici that support threatened or endangered wildlife. Table 30 lists the endangered and threatened species within Long County. Ludowici must cooperate with the Department of Natural Resources (DNR) to identify areas where endangered or threatened species are present. Staff from the Coastal Resources Division of DNR will work with Ludowici to locate and map these areas.

Table 30
Listed Species in Long County
(updated June 2002)

Species	Federal Status	State Status	Habitat	Threats
Mammal				
Altamah spinymussel Elliptio spinosa	Candidate Species			
Bird				
Bald eagle Haliaeetus leucocephalus	T	E	Inland waterways and estuarine areas in Georgia	Major factor in initial decline was lowered reproductive success following use of DDT. Current threats include habitat destruction, disturbance at the nest, illegal shooting, electrocution, impact injuries, and lead poisoning.
Red-cockaded woodpecker Picoides borealis	E	E	Nest in mature pine with low understory vegetation (<1.5m); forage in pine and pine hardwood stands > 30 years of age, preferably > 10" dbh	Reduction of older age pine stands and encroachment of hardwood midstory in older age pine stands due to fire suppression
Wood stork Mycteria americana	E	E	Primarily feed in fresh and brackish wetlands and nest in cypress or other wooded swamps. An active rookery was located in Long County in 1995. No active rookeries in 2000	Decline due primarily to loss of suitable feeding habitat, particularly in south Florida. Other factors include loss of nesting habitat, prolonged drought/flooding, raccoon predation on nests, and human disturbance of rookeries.
Bachman's warbler Vermivora bachmanii	E	E	Probably extinct; last seen in Georgia (Long County) in 1976	

Table 30 (continued)

Species	Federal Status	State Status	Habitat	Threats
Reptile				
Eastern indigo snake <i>Drymarchon corais couperi</i>	T	T	During winter, den in xeric sandridge habitat preferred by gopher tortoises; during warm months, forage in creek bottoms, upland forests, and agricultural fields	Habitat loss due to uses such as farming, construction, forestry, and pasture and to over collecting for the pet trade
Gopher tortoise <i>Gopherus polyphemus</i>	No Federal Status	T	Well-drained, sandy soils in forest and grassy areas; associated with pine overstory, open understory with grass and forb groundcover, and sunny areas for nesting	Habitat loss and conversion to closed canopy forests. Other threats include mortality on highways and the collection of tortoises for pets.
Amphibian				
Flatwoods salamander <i>Ambystoma cingulatum</i>	T	T	Adults and subadults are fossorial; found in open mesic pine/wiregrass flatwoods dominated by longleaf or slash pine and maintained by frequent fire. During breeding period, which coincides with heavy rains from Oct.-Dec., move to isolated, shallow, small, depressions (forested with emergent vegetation) that dry completely on a cyclic basis. Last breeding record for Long County was in the 1920's.	
Plant				
Dwarf witch-alder <i>Fothergilla gardenii</i>	No Federal Status	T	Low, flat, swampy areas, especially shrub-dominated margins of upland swamps (pocosins), Carolina bays, pitcherplant bogs, wet savannahs, and Atlantic white-cedar swamps	
Georgia plume <i>Elliottia racemosa</i>	No Federal Status	T	Sand ridges, dry oak ridges, evergreen hammocks, and sandstone outcrops in a variety of sandy soil conditions ranging from moist to very dry	
Pondspice <i>Litsea aestivalis</i>	No Federal Status	T	Margins of swamps, cypress ponds, and sandhill depression ponds and in hardwood swamps	
Fish				
Shortnose sturgeon <i>Acipenser brevirostrum</i>	T	T	Altamaha River from the confluence to the coast	Construction of dams and pollution, habitat alterations from discharges, dredging or disposal of material into rivers, and related development activities.

Mammals

The varied habitat of swamplands, wetlands, forests, and moist and dry uplands conducive to attracting a wide diversity of species of birds, also provides habitat for mammalian species known to the southeastern coastal plain. The following list describes a few common species that may be presently living in Ludowici.

- ③ Florida Opossum (*Didelphis marsupialis pigra*). Common in Georgia.
- ③ Evening Bat (*Nycticeius humeralis*). This and other bats are seen at dusk on warm nights searching for flying insects.
- ③ Georgian Bat (*Pipistrellus subflavus subflavus*). A common species in the area.
- ③ Seminole Red Bat (*Lasiurus borealis seminolus*). A common bat of the area.
- ③ Florida Raccoon (*Procyon lotor elucu*). The most abundant mammal in the area. It is found in wetland areas and near waterways.
- ③ Florida Striped Skunk (*Mephitis mephitis elongata*). This species is generally distributed on the upland surrounding the wet areas.
- ③ Red Fox (*Vu/pes fu/va fu/va*). This species is rare but occurs occasionally on the upland near waterways.
- ③ Southern Gray Squirrel (*Sciurus carolinensis carolonensis*). Abundant in the oak woodlands on the upland.
- ③ Florida Flying Squirrel (*Glaucomys volans querceti*). This species is rarely seen but is probably fairly common.
- ③ Georgia Pocket Gopher (*Geomys pinetis pinetis*). Sandy soils; fields; pine-oak woods.
- ③ Cotton Mouse (*Peromyscus gossypinus gossypinus*). Common throughout the area.
- ③ Swamp Rice Rat (*Oryzomys palustris palustris*). A fairly common mammal throughout the bays, swamp, and waterways.
- ③ Hispid Cotton Rat (*Sigmodon hispidus hispidus*). A common mammal in the pine woods and old fields on the upland around waterways.
- ③ House Mouse (*Mus musculus Linnaeus*). Where conditions permit, feral mice may be found in fields, along watercourses, and in other places where vegetation is dense enough to afford concealment.
- ③ Black Rat (*Rattus rattus rattus*) Common on farmstead.
- ③ Eastern Cottontail (*Sylvilagus palustris mallurus*). Commonly frequents brush-dotted pastures, the brushy edges of cultivated fields and clearings.
- ③ White Tailed Deer (*Odocoileus virginianus*). Prime areas are those that have a mix of forest, old fields and active croplands.
- ③ Armadillo (*Dasypus novemcinctus mexicanus*). It inhabits forests, scrub, and brushlands, but is most abundant in moist, bottomland hardwood forests.

Plants

Plants & Trees Common to Ludowici/ Moist to Dry, Generally Flat Areas

a) Pinelands:

a. <i>Pinus palustris</i>	Longleaf Pine
b. <i>Pinus elliotii</i>	Slash Pine
c. <i>Pinus taeda</i>	Loblolly Pine
d. <i>Quercus falcate</i>	Southern Red Oak
e. <i>Quercus nigra</i>	Water Oak
f. <i>Flex glabra</i>	Gallberry
g. <i>Lyonia fruticosa</i>	Staggerbush
h. <i>Polycodium sp.</i>	Deerberry
i. <i>Vaccinium arboretum</i>	Tree Huckleberry
j. <i>Aristida stricta</i>	Wiregrass
k. <i>Serenoa repens</i>	Saw Palmetto

b) Oaklands: associated with pineland, often establishing after pine is removed.

a. <i>Quercus falcate</i>	Southern Red Oak
b. <i>Quercus Marylandica</i>	Blackjack Oak
c. <i>Carya tomentosa</i>	Mockernut Hickory
d. <i>Quercus margaretta</i>	Shrubby Post Oak

M. Major Parks, Recreation and Conservation Areas

There are no major parks, recreation or conservation areas located in Ludowici.

N. Scenic Views and Sites

The city has not designated any sites or views as scenic.

4.1.2 Cultural Resources

The National Historic Preservation Act of 1966² as amended provides the statutory basis for historic preservation in our country. This Act was cited as the “National Historic Preservation Act” and whose purpose contains six elements. Congress commented on the “spirit and direction of the Nation.... reflected in our collective historic heritage and that these foundations require preserving as a “living part of our community life and development.” This provides an orientation or a valuable “sense of place” to the American people. Furthermore, Congress declared that the preservation of this irreplaceable heritage was in the public interest. This interest served to honor and preserves certain American legacies—cultural, educational, aesthetic, inspirational, and economic—whose maintenance enriches the lives of present and future generations of Americans. Within this context, a brief overview of cultural resources within the city limits of Ludowici suggests a richness of history and heritage worth protecting and preserving for present and future citizens in Ludowici and Long County, Georgia.

² United States Code, National Historic Preservation Act of 1966, as amended through 2000, <http://www.cr.nps.gov/hps/laws/NHPA1966.htm>.

A. Residential Resources

This inventory of homes located within Ludowici is by no means an exhaustive listing due to time constraints. Images of a few homes suggest the richness of historic resources within a residential setting and reflect local significance or unique distinctive building styles. Currently, building permits are not required for construction within the city limits, and the city has no land use or zoning ordinances.

Clyde Chapman Place

When an initial visit was made in mid-March 2005 to do a cursory inventory of cultural and historic resources, the Price Chapman, Jr. family had plans to remove the Clyde Chapman Place to make way for a new *McDonald's* franchise. After the visit, the 100+-year-old building was partially demolished. In the early 20th century, Ludowici red roof tiles were used on a variety of architectural styles throughout the city including vernacular, Queen Anne and Bungalow styles.

McQueen House

The Neill McQueen House is surrounded by spreading great live oaks and old growth magnolias. This two-story wood frame plantation-style mansion features double porticos, and a hipped roof, and white picket fencing, which defines the landscape. Currently occupied by the Cahill family, this impressive mansion is uncharacteristic of residences within the city, and overlooks the public park area adjacent to the old Ludowici Well Pavilion and the historic train depot. The small side building serves as a garage. Characteristic of many older structures within the city, the garage features a peaked roof and the lovely red Ludowici tile.

McClelland House

Located at 42 South Main Street, the McClelland House is a wood frame, shingled bungalow featuring prominent gables and tin roofing. Defining characteristics include four double-hung windows separated by a central hallway and an offset front porch with a shed roof supported by four plain columns. Currently, the occupants and owners of this property are Ludowici City Councilman and Mrs. Frank McClelland, Jr.

O'Neill-Allen Johnston House³

The O'Neill-Allen Johnston House (ca. 1850) is the oldest standing occupied residence within the city limits of Ludowici. Its history dates from this small city's beginnings when as a railroad stop, it was known as "Johnston's Station". The name changed to Ludowici in honor of a German manufacturer and philanthropist who saw "white gold" in red clay. Located on Macon Street along the railroad tracks at what was formerly the center of town, this home takes its name from the postmaster, Allen Johnston. It is made of wood frame construction with distinctive double chimneys. This home features several alterations including a kitchen addition, once used as the post office as well as two-story Colonial Revival style porches. According to

³ Long County Resource Files, CGRDC Library

oral history traditions, the Johnston House was set fire by Union soldiers, but when General W.T. Sherman was informed of a displayed Masonic emblem, the flames were extinguished.

B. Commercial Resources

Regrettably, the “Vanishing Georgia” collection housed at the Georgia Archives in Morrow, Georgia contains only two images of Ludowici and Long County. One of the two images is of 1970s-era Ludowici when Lester Maddox served as Georgia governor. The second image is rich in detail and shows a horse and buggy era, ca. 1905 and a photograph of *Hack’s Drugstore*, owned by Dr. Fred Hack.

Many of the historic commercial structures have vanished from the Ludowici landscape whether due to fire, demolition by neglect or willful destruction. One of the commercial brick structures formerly a contributing business to the town’s prosperity was Rimes Brothers Department Store, ca. 1911. Old time Ludowicians recall that anything from caskets to groceries was purchased there. In today’s landscape, an oversized mural on the old department store depicts various historic scenes that recollect those days of yesteryear in Long County and Ludowici. Of particular interest is the space demonstrating log rafting on the great Altamaha River when the mills at Darien and on St. Simons Island buzzed with activity as hardy settlers braved the south Georgia piney woods and swamps to harvest ancient growth trees.

Ludowici Well Pavilion⁴

The Ludowici Well Pavilion was listed on the National Register of Historic Places on September 7, 1984. A tract of land “measuring forty feet wide by fifty feet long” was located in the center of town and selected for sinking an artesian well. Donated by the Neill McQueen family, the well pavilion site was to be “kept open and free of access to the public” in order to provide a community resource for clean pure drinking water. The merger and relocation of the Ludowici Celadon Company propelled this section of Long County into a fast growing town whose infrastructure required clean water. According to popular belief, the McQueens stipulated that a pavilion be raised over the water source when they deeded the well to the town of Ludowici. In a slower paced era, townspeople gathered near the pavilion to swap stories and share in community and social activities, as well as political stumping.

C. Industrial Resources⁵

An inventory of the remaining walls, quarters and associated outbuildings of the Ludowici-Celadon Tile Company (1904-1914) was not done; however, photographic documentation of any remaining relics of this era would embellish the history of this small city as well as efforts to provide literacy and educational opportunities for the town’s citizenry. In addition, the Ludowici-Celadon Company of New Lexington, Ohio likely holds institutional records within the company archives. Copies of this material for the use of future researchers and for the children and citizens of Ludowici and Long County should be acquired and placed in the Long County Public Library at Ludowici.

Clay Hole

⁴ Undated pamphlet “The Ludowici Well Pavilion” produced by Long County Public Library; and Georgia DNR/HPD National Register of Historic Places (NRHP) files

⁵ Long County Resource Files, CGRDC Library

Although not visited, one of the important historic resources located within the city limits is the source of Ludowici's former prosperity. The "Clay Hole", a presumed deep pit, is currently owned by Long County Commission Chairman, Randall T. "Randy" Wilson.

D. Institutional Resources

Long County Courthouse⁶

Dating from 1926, the Long County Courthouse at 49 South McDonald Street is typical of early 20th century courthouse architecture. Its Neo-Classical style features a columned portico, brick with limestone trim and no clock tower because "standard time" made traditional courthouse clocks obsolete. The Masonic Order, Grand Lodge of Georgia F & AM placed a marble cornerstone on the Long County Courthouse dating its dedication.

In addition, an impressive Georgia Historic Commission Marker (091-1) erected near the cornerstone on the courthouse lawn gives a brief overview and explains the derivation of the county's name. It reads:

This County, created by Act of the Legislature August 14, 1920 is named for Dr. Crawford W. Long who first used ether as an anesthetic in a surgical operation at Jefferson, Georgia, March 30, 1815. Dr. Long was a graduate of Franklin College (now University of Georgia). Among the first County Officers were: Sheriff W.R. Wilkinson, Clerk of Superior Court C.W. Dawson, Ordinary T.J. Harrington, Tax Receiver J.McL. Cameron, Tax Collector T.H. Smiley, Treasurer R.D. Easterling, Coroner L.M. Branch and Surveyor M.C. Sarrason.

As citizens enter the courthouse foyer, there are three small historic exhibits: a plexi-glass encapsulated statue of Dr. Crawford W. Long donated on August 6, 1985 by former state senator Helen Williams Coxon; a large Ludowici Celadon Tile, ca. 1900-1912 and a handsome photograph of the Ludowici Well Pavilion. The Ludowici Tile inscription reads:

This town was named for the Karl Ludowici Family who owned the Ludowici Celadon Clay Tile Factory. The Ludowici Family provided funding to build the first school of higher education in Long County. Many of the homes in the area are still covered with tile of that era.

The photograph inscription notes that the historic well provided water for local citizens during the early 19th century. Roofing on the old community well is the hallmark of the small city—Ludowici red clay tile.

Masonic Lodge

Located near the Allen Johnston House, ca. 1850, the Masonic Lodge—Altamaha Lodge #227, F & AM, Ludowici, Georgia is a plain style, two story, wood frame structure with a tin roof.

Ludowici United Methodist Church

Located at Celadon and Main streets, the imposing Ludowici United Methodist Church stands as a testament to ingenuity. According to Ludowici Councilman Donald Combs, the original

⁶ Thematic National Register Nomination-Georgia Courthouses, January 1980; Jordan, Robert H & J. Gregg Puster, *Courthouses in Georgia*. Norcross, Georgia: Harrison and Company, 1984:140.

structure was rolled on logs from one side of town to the other. Later, exterior enhancements changed the church's appearance from wood frame construction to the red brick of today. This church clearly remains part of the community's oral traditions enriching the historic past, as well as spiritual life.

E. Transportation Resources

Ludowici Train Depot

During the mid 1840s, a railroad was built in Liberty/Long County where the village was known as "Four and a Half." Allen Johnston was a large property owner in the community and it is his name that history carried forward as "Johnston's Station"—a short stop on the railway system. Located near the Ludowici Well Pavilion, the old wood frame train depot stands today as a silent witness to Ludowici's growth and development as a small south Georgia town. In years past, the depot received funding for preservation needs when it served as the Ludowici City Hall. This is a key historic resource and every effort should be made to protect and preserve this important reminder of an earlier era, grounding the citizenry in a "sense of place" as a formerly prosperous railroad community. Interest in a museum for housing local artifacts and memorabilia of historic interest was expressed by the City Council. The old train depot would be an ideal spot and its setting conducive to community cohesiveness and interaction if the structure were restored and preserved as the "Ludowici/Long County Museum and Welcome Center."

F. Rural Resources

No farms, plantations or related agricultural sites are located within the city limits of Ludowici.

G. Other Historic, Archaeological and Cultural Resources

In general, the relics associated with the Ludowici Celadon Tile Roofing Company exist as a pre-World War I archaeological site ripe for preserving. For information on the various archaeological treasures located within the city limits of Ludowici, the reader should contact the Georgia Department of Natural Resources, Historic Preservation Division for technical reports generated due to the Section 106 Process of the National Historic Preservation Act of 1966 as amended. In addition, more complete information on archaeological resources is provided in the Georgia Archaeological Site Files at the University of Georgia.

4.2 Assessment of Current and Future Needs

4.2.1 Natural Resources

The City of Ludowici is served by municipal and individual wells. According to the 2003 Georgia County Guide, the public water service provider supplied approximately 270,000 gallons of water per day.

According to the U.S Environmental Protection Agency, all municipalities servicing more than 3,300 persons must comply with the Bioterrorism Preparedness and Response Act of 2002. The City of Ludowici has complied with this law. This process was completed before the deadline and the City of Ludowici is certified as having an adequate plan to respond to an emergency that involves its public water supply.

Ludowici has taken adequate measures to protect wellheads from contamination by placing buffer zones around them. All materials that can inflict or have the potential to cause injury to citizens have buffers and safeguards to prevent leakage and/or spillage.

All builders conducting construction operations in Ludowici are encouraged to use appliances that conserve water.

Ludowici has no Water Supply Watershed areas.

Ludowici has no Groundwater Recharge areas.

Ludowici has adopted the Wetlands Protection Ordinance. This Ordinance is intended to implement rules of the Georgia Department of Natural Resources' Environmental Protection Division known as the "Rules for Environmental Planning Criteria" as they specifically relate to wetlands (Rule 391-3-16). To ensure compliance with this ordinance Ludowici will utilize the Long County Code Enforcement Officer to ensure that the ordinance is enforced and work with the Long County Health Unit, USDA's Natural Resources Conservation Service and Department of Natural Resources to ensure that the wetlands are protected.

Ludowici has no Protected River Corridors.

No Coastal regions are located in Ludowici.

Flood maps covering Ludowici are in particular need of an update since some of the denoted flood hazard areas do not correspond with existing topography and known flood prone areas. Based on the city's topography, flood hazards do exist near Jones Creek which is located on the western border of Ludowici. Flood hazards must be considered when making development decisions.

The general soil map in this plan is useful to people who want a general idea of the soils in Long County. The map is not suitable for the management of farms, construction projects, or similar projects that require a detailed analysis of soil composition. For more detailed information reference "Soil Survey of Liberty and Long Counties, Georgia", United States Department of Agriculture, Soil Conservation Service, 1982.

To ensure coordination between soil types and usage, Ludowici must consider collaborating with the Long County Health Unit, Department of Natural Resources and the USDA's Natural Resources Conservation Service (NRCS) to ensure that a review process is developed to ensure reasonable compatibility with soil types. An ordinance adopted to maintain the soils integrity is the Soil Erosion and Sedimentation Control Ordinance (2001).

Ludowici has no areas that have a slope of 25 percent or greater for at least 500 feet horizontally; nor any ridges, summits, or ridge tops that lie at elevations higher than any such identified area.

No prime agricultural and forested lands exist in Ludowici.

It is important to protect fragile biological and ecological communities because the destruction of one species may lead to the loss of other species, as they are all interrelated. Ludowici will work

with all local, state and federal agencies to ensure that recognized endangered and/or threatened species are protected.

To reduce the impact of growth on these habitats, Ludowici will work with the Long County Code Enforcement officer, the Long County Health Unit, the USDA's Natural Resources Conservation Service to ensure that habitats are not threatened by land disruption activities and that the integrity of those habitats are maintained and protected.

Ludowici has no major parks, recreational areas and or conservation areas.

No scenic views or sites have been identified within Ludowici. Currently, no special management practices are needed.

Ludowici does have a major highway, US 84, running east-to-west. Ludowici does not have an ordinance to regulate the placement of signs or billboards along this route. Ludowici has no landscaping, buffer or setback requirements.

4.2.2 Cultural Resources

The preservation of cultural, historic, and archaeological resources is one of many factors that can have a positive impact on a community's quality of life, visual appeal, tourism potential, downtown and neighborhood revitalization and future economic development opportunities. The preservation and protection of historic buildings, districts, sites and landscapes play an important part in maintaining and developing an appealing sense of place and promoting a community's pride in its heritage.

Based on the windshield survey conducted for this plan, a detailed historic and archaeological resources inventory is needed. An assessment of the importance and potential of these resources needs to be conducted in terms of promoting tourism, improving community design, preserving the traditional atmosphere of the community, creating a healthy downtown economy and providing cost effective space for government functions and public activities. It should also be determined if further documentation of the resources is necessary and if any particular resources are endangered by rapid deterioration or conflicting land use patterns.

Approximately 10 percent of the homes in Long County were constructed before 1939. The majority of these homes are of wood frame construction, have gabled roofs, brick chimneys, and 1/1 windows.

Ludowici does have a historic preservation ordinance. The CGRDC Historic Preservation Planner is working with the city to establish a commission and to see if funds are available to conduct a historic survey to identify areas and structures that are in need of protection.

Inclusion on the National Register of Historic Places (NRHP) may help preserve an historic property. It provides recognition of a property's historical significance and ensures that any impacts on the property will be taken into account during the planning of state and federally licensed or permitted projects.

Owners of NRHP properties may qualify for federal historic preservation grants or tax benefits gained through the charitable contribution of preservation easements to nonprofit organizations. Owners of income producing properties listed on the NRHP are eligible for federal tax credits for rehabilitation work meeting preservation standards.

The Georgia Register of Historic Places is similar to the NRHP except that it is only a listing of important historic properties for the State of Georgia. The Historic Preservation Division (HPD) of the Georgia Department of Natural Resources administers this program. The Georgia Register qualifies a property for state tax incentives. These incentives provide an 8-year freeze on property tax assessments for an historic property that has undergone substantial rehabilitation.

Two federal tax incentive programs currently apply to preservation activities: the rehabilitation investment tax credit (RITC) and the charitable contribution deduction. The RITC effectively reduces the costs of rehabilitation to an owner of an income-producing historic property. The RITC is a 20 percent tax credit that goes toward rehabilitation costs. To be eligible for an RITC, a property and the rehabilitation done on it must meet specific requirements laid out by the Department of the Interior. A charitable contribution deduction is a one-time federal tax deduction that can be taken by an historic property owner who donates a facade easement on his/her building to a non-profit organization interested in preservation.

The Georgia Tax Incentive Program is designed to encourage rehabilitation of both residential and commercial historic buildings that might otherwise be neglected. The law provides an owner of a historic property that has undergone substantial rehabilitation an eight-year freeze on property tax assessments. The building is valued on its worth prior to the rehabilitation and that value is frozen for eight years. The program is carried out by the Office of Historic Preservation in the Georgia Department of Natural Resources and by your county tax assessor. To be eligible, a property and the rehabilitation to it must meet certain requirements including either the National Register listing or Georgia Register listing.

There are many other preservation tools besides the ones previously described. Many of these exist in the form of preservation technical assistance and grants. Technical assistance on preservation issues can be obtained from the Historic Preservation Planner at the CGRDC, HPD, the National Park Service, the Georgia Trust for Historic Preservation, and the National Trust for Historic Preservation.

In the area of grants, there are many available but all have certain criteria that must be met. Grants that are fairly common and are available to Long County include: the Local Development Fund administered by the Georgia Department of Community Affairs, the Preservation Services Fund administered by the National Trust for Historic Preservation, the Governor's Discretionary Fund administered by the Georgia Governor's Office, and Survey and Planning Grants administered by HPD.

To preserve and protect the cultural resources in Ludowici, education must be a key component. Outreach programs and citizen participation are necessary if these resources are to be protected for the enjoyment of future generations.

4.3 Goal and Implementation

Goal 1

Identify and protect the Natural and Cultural Resources of Ludowici.

Objective 1.1

Develop a program to identify the natural and cultural resources of Ludowici.

Policy 1.1.1

Develop a Historic Preservation Commission.

Objective 1.2

Achieve designation as a Certified Local Government (CLG)

Policy 1.2.1

Improve accessibility for handicapped persons to downtown with proper sidewalk ramps and parking areas.

Policy 1.2.2

Develop a driving tour of the City of Ludowici that enhances the appreciation of the cultural and natural resources.

Objective 1.3

Protect the 100-year flood plains of Ludowici from development that would negatively affect water quality.

Policy 1.3.1

Enforce the Georgia Department of Natural Resources Part V Ordinances.

Policy 1.3.2

Develop a Growth Management Plan to limit growth in potential flood areas and that recognizes the significant cultural and natural resources

Policy 1.3.3

Conduct an Historic Resources Survey

Objective 1.4

Identify and protect wetlands in Ludowici from development that would have a negative impact on water quality.

Policy 1.4.1

Restrict the density of development in areas not served by sewer or water facilities.

Objective 1.5

Protect fresh water including the water quality of the Altamaha River and tributary creeks by controlling erosion and sediment runoff.

Policy 1.5.1

Develop a program to stabilize and pave dirt roads that are a large source of runoff and produce large amounts of sediment.

Policy 1.5.2

Identify and protect Ludowici's wetland areas from developments that would have any adverse impact.

Policy 1.5.3

Encourage the NRCS to complete a soil survey for the City of Ludowici.

Objective 1.6

Prepare a downtown development plan for the City of Ludowici that promotes its uniqueness.

Policy 1.6.1

Promote the development of specialty shops in vacant buildings in downtown Ludowici.

Objective 1.7

Support programs and agencies that promote and protect the natural and cultural resources, and the unique character of the City of Ludowici.

Policy 1.7.1

Encourage owners of historic structures to rehabilitate them and nominate them for inclusion in the National Register of Historic Places.

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